



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,508	07/18/2005	Orjan G. Martinsen	2800-0127	4530

6449 7590 03/18/2010
ROTHWELL, FIGG, ERNST & MANBECK, P.C.
1425 K STREET, N.W.
SUITE 800
WASHINGTON, DC 20005

EXAMINER

FOREMAN, JONATHAN M

ART UNIT	PAPER NUMBER
----------	--------------

3736

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

03/18/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary

Application No.

10/537,508

Applicant(s)

MARTINSEN ET AL.

Examiner

JONATHAN ML FOREMAN

Art Unit

3736

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 13 is/are allowed.
- 6) ☒ Claim(s) 2,5 and 11 is/are rejected.
- 7) ☒ Claim(s) 3,4,6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date 7/30/09
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 7/30/09 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been placed in the application file, and the information referred to therein has been considered by the examiner as to the merits.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 2, 5 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,321,112 to Masuo.

In regard to claims 2, 5 and 11, Masuo discloses a current source (Col. 6, lines 10 - 17); at least four electrodes (17, 18, 19, 20, 55, 56, 57, 58) at chosen positions relative to each other (Figure 1), the positions providing at least two relative distances between the electrodes, wherein a chosen first pair of said at least four electrodes constitutes current supply electrodes (Col. 5, lines 35 – 36), and a chosen second pair of the at least four electrodes, of which at least one does not constitute a current supply electrode, constitutes pickup electrodes (Col. 5, lines 36 – 38); a measuring instrument coupled to said at least four electrodes for measuring the impedance between said chosen pair of pickup electrodes for providing a value characterizing the structure (Col. 6, lines 29 – 30); storage means for storing a predetermined set of values characterizing a chosen condition for the structure (Col. 6, lines 25 – 31); and the sensor also comprising calculation means for comparing the characteristics from each of the at least one pair of pickup electrodes with said set of

predetermined values for detecting if said structure is in a certain condition (Col. 11, lines 53 - 60; Col. 13, lines 12 - 20), and the sensor assembly is adapted to alternating coupling of at least one current supply and measuring instrument to different electrode pairs with different distances between them (Figures 7 - 12), for measuring characteristic values at different depths in said structure. The supplied current oscillates within a chosen frequency range. Masuo discloses control means for interchanging the roles of the electrodes such that the roles of the pickup and supply electrodes may change sequentially (Col. 7, lines 35 - 37, 57 - 60; Col. 8, lines 6 - 9, 23 - 26, 45 - 49).

Allowable Subject Matter

4. Claims 3, 4, 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 12 and 13 are allowed.

Response to Arguments

5. Applicant's arguments filed 10/26/09 have been fully considered but they are not persuasive. Applicant asserts that Masuo fails to disclose a sensor assembly adapted to alter which electrodes constitute current supply electrodes and/or which electrodes constitute pickup electrodes between different measurements so as to alter the distance(s) between the current supply electrodes and/or the pickup electrodes to thereby alter the depths of the structure at which the measurements are performed". However, the Examiner disagrees. Masuo discloses a sensor assembly adapted to alter which electrodes constitute current supply electrodes and/or which electrodes constitute pickup electrodes between different measurements so as to alter the distance(s) between the current supply electrodes and/or the pickup electrodes to thereby alter the depths of the structure at which the measurements are performed (Figures 7 - 12; Col. 7, lines 35 - 37, 57 - 60; Col. 8, lines 6 - 9, 23

– 26, 45 – 49). Because the electrodes of Masuo are spaced at different locations and disclosed as being alternated between, it is inherent that the depth of the structure at which the measurements are performed are altered.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN ML FOREMAN whose telephone number is (571)272-4724. The examiner can normally be reached on Monday - Friday 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571)272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. M. F./
Examiner, Art Unit 3736

/Max Hindenburg/
Supervisory Patent Examiner, Art Unit 3736